

Atty. Docket No. YOR920030199US1
(590.110)

REMARKS

Applicant and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. In the Office Action dated September 9, 2006, pending Claims 1-9 were rejected and the rejection made final. In response, Applicants filed an Amendment After Final, and consequently received an Advisory Action. Applicant has thus filed herewith a Request for Continued Examination (RCE) and respectfully requests the Office to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

Of the claims pending in the instant application at the time of the outstanding Office Action, Claims 1, 5, and 9 are independent claims; the remaining claims are dependent claims. Claims 1, 5 and 9 have been rewritten. The Applicants, however, intend no change in the scope of the claims by the changes made by this amendment. It should be noted this amendment is not in acquiescence of the Office's position on the allowability of the claims, but merely to expedite prosecution.

Claims 1-9 stand rejected under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. The independent claims had previously been amended to address this issue. Based upon the arguments below, reconsideration and withdrawal of this rejection is respectfully requested.

Specifically, the outstanding Office Action asserts that no the instant invention has no specific purpose or use. Further, the Office Action asserts that the instant invention does not produce a final result or a useful, concrete, and tangible result. Thus,

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the outstanding Office Action asserts that the claimed invention has no real world function and thus is not statutory. This rejection is respectfully traversed.

A review of the "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility", however, shows this rejection is inappropriate. As stated therein,

In determining whether the claim is for a "practical application," the focus is not on whether the steps taken to achieve a particular result are useful, tangible and concrete, but rather that the final result achieved by the claimed invention is "useful, tangible and concrete."

The present case, the Office appears to have improperly focused on the individual claim elements, not on the claim as a whole.

Moreover, the Interim Guidelines also quote *Corning v. Burden*, 56 U.S. (15 How.) 252, 268 (1854) for the proposition that "[i]t is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . .". At a minimum, Applicants respectfully submit that each independent claim produces "a beneficial result or effect" (i.e., a method that allows for the effective classification of data objects). It is submitted the claims of the present application produce a result at least as beneficial as the result produced in the claims of U.S. Patent No. 7,133,856 which issued on November 7, 2006 (David Vincent, Primary Examiner; Mai T. Tran, Examiner) (See Claim 1, "[a] method of classifying subjects into classes"). Thus reconsideration and withdrawal of this rejection is respectfully requested. In the unlikely event this rejection is not withdrawn, further clarification is respectfully

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requested. See Interim Guidelines ("Whenever practicable, USPTO personnel should indicate how rejections may be overcome and how problems may be resolved.").

Claims 1-9 also stand rejected under 35 U.S.C. 112, first paragraph, as a result of being rejected under 35 U.S.C. 101. This rejection is respectfully traversed upon the grounds of explanation given above. Based upon the current state of the claims, this rejection is neither applicable nor valid. Further, Applicant interprets this explanation from the examiner as an assertion that the claims are not enabled by the specification because they are not "practical". Applicant respectfully traverses the rejection on that basis as well, because the claims find full support in the specification as filed. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Marshall.

Broadly speaking, the present invention relates to the classification of objects. This classification is achieved using the best boolean expression that represents the most optimal combination of the underlying features. This boolean expression is optimized through the minimization of the error of the expression which defines the query. Specifically, the instant invention determines a query function that establishes the properties an item returned should possess. These properties are exemplified by the expressions in the query. The items which best define the query are determined. The error to be minimized in determining the best definition of the query is the false positives and false negatives of the query. These two steps represent a type of the classification of the instant invention. It is then decided whether the item belongs in the query based upon

the selected properties. This decision is considered as cross-validation of the classification.

In contrast to the present invention, Marshall relates, as best understood, to a method for classification to ordinal categories by nesting binary partitions of data. Marshall does not discuss or disclose optimization of the boolean expression which defines the query. Rather, Marshall discusses binary partitions of ordinal data, and the nesting of those partitions. Further, there is no minimization of the error of the expression, let alone analysis of such error. The arguments of the previous Amendments are equally applicable here.

The most immediate failure of the prior art in teaching the invention as claimed is the failure of Marshall to teach a "identifying properties of objects" and "formulating a query to identify objects having properties of interest" which goes to the heart of the present invention. In the outstanding Office Action, the Examiner asserts that the rules (1) and (2) on page 2724 of Marshall are queries, the symbols F, T, U, and H are properties of interest, and the set formed by those properties of interest are objects. It is respectfully submitted that a crucial part of the instant invention relates to formulating a query to identify objects having properties of interest. There is no teaching or suggestion in Marshall as to how the query was formulated. Rather, Marshall compares all of the boolean combinations of the data to find a binary partition of the data. This is in no way comparable or suggestive of formulating a query to identify objects having properties of interest.

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To this extent, Marshall definitely fails to teach formulating the query, "wherein the formulation of the query takes into account the desired form of output and the properties an object returned should possess". As mentioned above, there is no direct teaching or suggestion of Marshall formulating any type of query. A formulation that takes into account the desired form of output and the properties an object returned should possess is definitely not taught or suggested by Marshall. Even if one were to take into account the rules that the Examiner asserts are equivalent to the queries, the formulation of those rules have not been shown in the cited art. Additionally, there is no teaching or suggestion, that those rules take into account the desired form of output, or may change or manipulate the input to return more than one type of output. Specifically, the rules necessarily yield a binary form of output, wherein the objects are either classified into one group or another. There is no suggestion or teaching that more than one form of output could be yielded, and further no teaching that the formulation of those rules would take into account the form of output and manipulate the rules to yield that type of output. Thus, Marshall does not in any way anticipate formulating a query, wherein the formulation of the query takes into account the desired form of output and the properties an object that it returns should possess.

Regarding the rejection of independent claims 1, 5, and 9 the Examiner cites the SPAN approach to classification, using a binary approach to classify ordinal data. This is in stark contrast the independent invention, which has no such limitations as to type of data or to a binary approach. Specifically, the independent invention states a method of "identifying properties of objects, formulating a query to identify objects having

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properties of interest, selecting properties of the objects to compare with object properties included in the query, and determining if based on the selected properties if the object belongs in the query, wherein the formulation of the query takes into account the desired form of output and the properties an object returned should possess”.

For these reasons alone, anticipation is improper because, at the very least, “[a]nticipation requires the disclosure in a single prior art reference of each element of the claim under construction.” W.L. Gore & Associates, Inc. v. Garlock, 721 F.2d 1540, 1554 (Fed. Cir. 1983); see also In re Marshall, 198 U.S.P.Q. 344, 346 (C.C.P.A. 1978). Thus, reconsideration and withdrawal of this rejection is respectfully considered.

In view of the foregoing, it is respectfully submitted that independent claims 1, 5, and 9 fully distinguish over the applied art and are thus are in condition for allowance. By virtue of dependence from what are believed to be allowable independent claims, it is respectfully submitted that claims 2-4 and 6-8 are also presently allowable.

The “prior art made of record” has been reviewed. Applicants acknowledge that such prior art was not deemed by the Office to be sufficiently relevant as to have been applied against the claims of the instant application. To the extent that the Office may apply such prior art against the claims in the future, Applicants will be fully prepared to respond thereto.

In summary, it is respectfully submitted that the instant application, including claims 1-9, is presently in condition for allowance. Notice to the effect is earnestly

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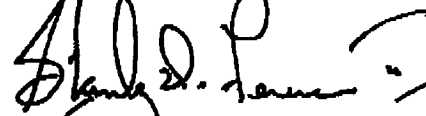
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solicited. If there are any further issues in this application, the Examiner is invited to
contact the undersigned at the telephone number listed below.

Respectfully submitted,



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